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(19) (CA) **APPLICATION FOR CANADIAN PATENT** (12)

(54) Image Data Integration (IDI)

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(71) Same as inventor

(57) 3 Claims

Notice: This application is as filed and may therefore contain an incomplete specification.



Industrie Canada Industry Canada

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Abstract (IMAGE DATA INTEGRATION)

A process used for cutting puzzles and other such enigma using an Industrial Laser designed to cut steel and a variety of other materials including wood, and wood products, plastic and plastic products. Making use of the Computer driven feature of this technology, together with Photographs, Lithographs, or other printed matter, this process will produce puzzles of very unique quality.

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Specification (IMAGE DATA INTEGRATION)

This process relates to the production of puzzles using a computerised Industrial laser cutting machine.

Conventional puzzles are commonly made of cardboard on which a lithograph has been printed, they are then cut in a press cutter using a pattern that has nothing in common, or that in no way relates to the image. These are commonly referred to as "fully interlocking pieces".

A better attempt at relating the image to the puzzle pieces has been to manually cut the pieces using a Jig Saw or similar tool in an attempt to cut more accurately around specific elements of the image. This however is inaccurate and inefficient.

I have found a way to accurately integrate the image and the puzzle pieces.

Through the use of Computer Aided Design (CAD) software, a laser cutting machine that utilises CAD files, and images such as photographs or lithographs, I am able to create unique designs or digitize existing shapes to produce puzzles of unique quality and unparalleled accuracy.

The process starts with the desired image printed or affixed to a suitable material or media. Specific points on the image are then digitized as numerical values using CAD software. A reference starting point is indicated and the work piece is positioned square on the cutting bed. The digital file that is produced is used to guide a computer driven laser cutting device to accurately cut the desired areas and shapes on the image.

To clarify the process I will describe a possible application. Please note that this is only one example of this process. Begin with a photograph of a farmers field, on this field in the foreground are ten daisies (flowers), in the midground is a cow, and mountains on the horizon. Using IDI here are some of the possibilities.

- (a) The entire image is turned into a puzzle.
- (b) Only the daisies and the cow are cut as complete shapes.
- (c) Step a, and b, can be combined. The entire image is turned into a puzzle except the daisies and the cow which will integrate as complete shapes.

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Specification (IMAGE DATA INTEGRATION)

(d) The majority of the image is cut into puzzle pieces, however areas of interest such as the daisies the cow and the mountains will incorporate smaller or more complex pieces.

(e) Just the areas of interest are cut into puzzle shapes, the flowers, the cow, and the rest of the image is left untouched.

The age and intellect level of the intended user will of course determine the complexity of the application.

As demonstrated in the previous example IDI has wide application possibilities with respect to puzzle creation.

If an Image is scanned or digitized, then the shape of that image is cut from a particular material without integrating the original image, this would not be considered IDI. However if the image is used as an integral part of the final cut, this could be considered IDI.

Protection is being sought exclusively for the creation and manufacture of puzzles, games which involve peicing together interlocking or precise fitting pieces, and other such enigma.

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Claims (IMAGE DATA INTEGRATION)

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A process to integrate an image or specific areas or elements of an image printed on or affixed to a suitable media, and a laser cutting device to produce accurately cut pieces which relate to the image and whose pieces will fit together or interlock with each other to recreate the image.
2. A process as defined in claim 1, which will integrate the image and the cut with an accuracy of .010 inch + - .005 inch.
3. A process as defined in claim 1,2, with regard to puzzles, and or games which involve peicing together interlocking or precise fitting peices.